## ABSTRACT

A process for the production of an amide comprising: (a) reacting $R_1$-CX and oxygen to form $R_1$-COOH, wherein the reacting occurs in the liquid or vapor phase and in the presence of a first catalyst, wherein X is a group that leaves upon oxidation, and wherein $R_1$ is phenyl, which is unsubstituted or substituted by one or more identical or different radicals selected from ($C_1$-$C_{12}$)-alkyl, ($C_1$-$C_{12}$)-alkoxy, ($C_1$-$C_{12}$)-alkanoyloxy, ($C_1$-$C_{12}$)-alkanoyl, amino, hydroxyl, -$CH_2$-O-($C_1$-$C_{12}$)-alkyl, -NH-($C_1$-$C_{12}$)-alkyl, -NH-CO-($C_1$-$C_{12}$)-alkyl, or -S-($C_1$-$C_{12}$)-alkyl; (b) separating the $R_1$-COOH from the mixture formed in step (a), wherein the $R_1$-COOH is maintained in a liquid or vapor phase; and (c) reacting the $R_1$-COOH maintained in the liquid or vapor phase from step (b) with an amine to form an amide, wherein the reacting occurs in the vapor phase and in the presence of a second catalyst.